

Date: Sun, 30 Jan 94 13:07:08 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #93
To: Info-Hams

Info-Hams Digest Sun, 30 Jan 94 Volume 94 : Issue 93

Today's Topics:

 ANS-029 BULLETINS
 Anyone have cct diagram for HP2160A PSU pse ?
 Code tapes, looking for.
 FCC: Whats taking so long????
 FCC form 610-V
 Frequencies for Animal Tracking ?
 Help - your Vertical Ant. experiences.
 X application for code?

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 30 Jan 94 19:10:57 GMT
From: news-mail-gateway@ucsd.edu
Subject: ANS-029 BULLETINS
To: info-hams@ucsd.edu

SB SAT @ AMSAT \$ANS-028.01
DOVE WATCHERS TO BE RECOGNIZED

HR AMSAT NEWS SERVICE BULLETIN 028.01 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 29, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-028.01

DOVE (DO-17) Telemetry Watchers Will Be Recognized

This weekend the DOVE (DO-17) Command Team will begin using the DOVE text message frame to transmit the callsigns of everyone who has sent a DOVE reception report to Dr. Junior Torres De Castro (PY2BJ0) of the Brazilian AMSAT Group, BRAMSAT, the owner of DOVE. Because of the limited length of that frame, about 15 calls will be sent at a time and the message will be changed about every 3 or 4 days. This is the DOVE Ground Command Team's way of thanking everyone who has sent in reports (several hundred at present). Special DOVE QSL cards will also be mailed to those who have reported DOVE reception to PY2BJ0. We are particularly interested in hearing about the equipment used and the quality of the signals. We would also like to hear about the use of DOVE signals or data in education. Actual telemetry is not needed at this time.

Please send reports to:

Dr. Junior Torres De Castro (PY2BJ0)
119 Macaubal
Sao Palo
Brazil 01254

[The AMSAT News Service would like to thank Jim White (WD0E) and the DOVE Command Team for this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-028.02
ANTENNA POLARIZATION REVISITED

HR AMSAT NEWS SERVICE BULLETIN 028.02 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 29, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-028.02

Antenna Polarization Sense Revisited By WD0E

There have been many discussions occurring on Compuserve's HAMNET forum and in various corners of the amateur radio community about the need for antenna polarity switching while using the OSCAR satellites. DOVE Command Team member Jim White (WD0E) wants to add some further comments about this important issue based on his years of experience working with the MICROSATs.

Case For Polarization Switching

"The following is based on design data, direct measurements and experimentation, surveys, and anecdotal evidence from discussion threads on the digital birds and Compuserve. I believe the empirical data is correct, but an error or two could certainly have crept in. I submit it for discussion and comment. The sense (right or left) of the circular polarization of the four original MICROSATs changes depending

on the transmitter in use. There was no attempt to make a particular transmitter any sense. The way they came out was based on how the semi-rigid cable and components could be designed into the transmitter module. Here is a list of the sense of each one:

- AO-16 RC 437.050 RHCP
- AO-16 PSK 437.025 LHCP
- DO-17 XMTR A 145.825 LHCP
- DO-17 XMTR B 145.825 RHCP
- WO-18 RC 437.100 RHCP
- WO-18 PSK 437.075
- LO-19 RC (&CW) 437.125 RHCP
- LO-19 PSK 437.050 LHCP

The AO-16 PSK XMTR and the WO-18 PSK XMTR have problems and are not presently in use (although the AO-16 PSK transmitter - with LHCP - was used for about three years). We normally run XMTR B on DOVE because it is slightly more efficient. Last time I checked LO-19 was being switched occasionally between it's two. So it is strictly coincidence that three of these are RHCP virtually all the time. LO-19 changes. Problems with any of the xmtrs presently in use could result in a switch, which would change their downlinks to LHCP.

As long as you are receiving strong signals from these satellites, a miss-matched sense will not reduce the margin enough to cause missed data. However, if the signal is weak, because of a marginal receive arrangement or low power from the satellite, a miss-matched sense will cause significant loss of data. Uplinks are not a problem because they use monopoles and the receivers are very sensitive.

F0-20 is circular and has a fixed sense both up and down, but because of it's orbit geometry and motion, continuously good signals through it for an entire pass can only maintained if sense is switched, usually several times and on both uplink and downlink. This is particularly noticeable in the analog mode.

On AO-21, the 435 MHz receiving antenna, which is shared by the analog and digital modes, is a Helix with up to +3 db gain using Right Hand Circular Polarization. The 145 MHz transmitting antenna is a half-wave dipole. These antennas are always earth-pointing due to the satellite's gravity gradient attitude stabilization system. It is clear from a little experimentation and from listening to the DSP FM repeat mode, that changing sense makes a significant difference in the overall link. At times, it is the difference between being heard and not. It changes during a pass. The UOSAT series use monopole antennas. I have never noticed a difference in link efficiency when sense is switched.

I have no data on which AO-26 transmitter has which sense. But this is

a MICROSAT design, so changing transmitters will change sense. In it's first weeks of store and forward operation it was running very low power and incorrect sense made a large difference in received strength during most parts of most passes. If it continues to be necessary to run low power from this satellite, or if the LHCP transmitter is used, left hand sense will be necessary, and switching during a pass may be essential for efficient operation.

A0-27 (EYESAT) uses a monopole for the downlink so sense makes little difference when the amateur transmitter is on high power. However, when receiving very weak signals from it (exciter only), switching sense is necessary to be able to even detect the signal at times. It remains to be seen how much power this bird will be able to sustain on it's amateur (secondary) transmitter, so downlink sense could be an issue. Uplink is not an issue, as a monopole is used with very sensitive receivers.

UNAMSAT is built on a MICROSAT design. It's downlink sense may be left or right depending on which transmitter is used. Downlink power and sense will not be known until this bird is in orbit and becomes operational. During checkout it is likely both transmitters will be used at times, requiring sense switching. Tumbling during the first few days in orbit will almost certainly require switching. Downlink power *could* be somewhat lower than A0-16 and L0-19 because of the power necessary to run the meteor experiment transmitter. This situation would be similar to W0-18, which routinely runs at about half of the power of A0-16 and L0-19 because of the need to support the experiments.

VOXSAT will use monopole antennas, so the link polarization and sense needs may be similar to A0-21.

A0-13: Gain antennas are RHCP. When the satellite is at or near apogee and/or pointing angles are good, RHCP is always best. However, when there is significant off pointing or the omni's are in use, LHCP can often result in better uplink and downlink signals. LHCP can be better both in terms of more strength and reduced depth of spin modulation fade.

Stan Wood (WA4NFY) informs me that Phase-3D will use all RHCP for its circular antennas. Since it will be nadir pointing at all times, sense switching should not be necessary. This assumes all goes as planned, and we certainly hope it does!

I may have left out a bird or two, and have not hit all those being planned. Nor have I attempted to exhaustively document all situations or those of interest only to command stations. However, there are numerous situations in the foregoing where LHCP is necessary or favored. Using the wrong sense will reduce efficiency and/or enjoyment. In a few cases it may make operation impossible. There is certainly much enjoyment available to a satellite enthusiast with fixed RHCP antennas

(or even linear). But I hope I have shown that full utilization of our satellite resources requires switchable antenna circularity."

[The AMSAT News Service (ANS) would like to thank Jim White (WD0E) for this bulletin. If you would like to respond to Jim's thoughts on antenna polarization, he can be reached at his INTERNET address of: wd0e@amsat.org. Also, the ANS would like to thank DB20S for the information about the AO-21 antennas.]

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SB SAT @ AMSAT \$ANS-028.03
PHASE 3-D STATUS REPORT!

HR AMSAT NEWS SERVICE BULLETIN 028.03 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 29, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-028.03

AMSAT-NA PHASE 3-D TEAM JOINS WITH FLORIDA-BASED ENGINEERING GROUP FOR SPACECRAFT INTEGRATION

About a half dozen members of the North American Phase 3-D Development team met recently to assess overall progress on the program and to begin planning for the spacecraft's final assembly in preparation for its April, 1996 launch from Korou, French Guyana.

Dick Jansson (WD4FAB), AMSAT VP for Engineering, hosted the North American Phase 3-D progress meeting near Orlando, Florida on 7-9 January, 1994, where a number of critical Phase 3-D issues were discussed. While several open items still must be resolved, AMSAT-NA's overall technical contributions to the Phase 3-D project remain on track.

"We're still on schedule for the 1996 launch," said Bill Tynan (W3X0), AMSAT-NA President. "I am really proud of the way everyone on the North American team is pulling together to insure our responsibilities to the international project are met", he said.

The high point of the meeting came when several officers of a Florida-based volunteer group, called Space Frontier Operations (SFO), presented their proposal to manage the overall integration effort for the Phase 3-D spacecraft. After extensive discussions concerning their capabilities and proposed integration approach, SFO's offer was gratefully accepted by Bill Tynan, Dick Jansson, and the rest of AMSAT-NA Phase 3-D team members present.

Space Frontier Operations is a relatively new group based in the Orlando/Cape Canaveral, Florida area. Presently, their membership stands at about one hundred. They are, however, a rapidly growing, not-for-

profit, Florida corporation dedicated to the private, non-commercial, use of space. Their first project was a "Get-Away Special" (GAS Can) experiment which will fly on an upcoming NASA Space Shuttle mission. Most SFO members are also connected professionally to NASA or other space agencies at the Cape. Together, they bring several decades of "hands on" experience designing and building a wide variety of government and commercial space hardware to the Phase 3-D integration effort.

"We are very honored to be associated with such a prestigious group as AMSAT", said Andy Clark, SFO's Chief Executive Officer at the recent Orlando meeting. He went on to note, "We believe our professional aerospace experience will bring another, very positive dimension to an already outstanding international Phase 3-D team." These same feelings were echoed by Mike Peacock (KR4GA), SFO's Director of Engineering, who stated that because SFO and AMSAT share many of the same goals, the partnership should prove mutually beneficial.

Also on hand for the meeting were Keith Baker (KB1SF), AMSAT VP, Strategic Planning, who discussed the overall Phase 3-D Master Schedule. In addition, Stan Wood (WA4NFY), updated the team on Phase 3-D's various antenna designs. Dick Daniels (W4PUJ), AMSAT's North American P3-D Team Director along with Dr. Tom Clark (W3IWI), P-3D GPS experiment Team Leader, joined the group by telephone. Longtime AMSAT satellite builder Jan King, W3GEY, and Lyle Johnson (WA7GXD), from TAPR, were also present and served as technical advisors to both teams during the discussions.

Final designs for solar cells, solar panels, batteries, as well as the progress now being made on the spacecraft's overall structure were also discussed. In addition, possible integration sites in the Orlando/Cape Canaveral area were evaluated and several team members toured a candidate facility at the Orlando International Airport. A final selection regarding the most cost-effective location for Phase 3-D integration will be made once firm rental price proposals are received and evaluated by the now AMSAT-NA/SFO combined Phase 3-D integration team.

[The AMSAT News Service would like to thank Keith Baker (KB1SF) for this bulletin item. Keith can be reached at his Compuserve address of 75070,331.]

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SB SAT @ AMSAT \$ANS-028.05
AO-13 OPERATIONS NET SCHEDS

HR AMSAT NEWS SERVICE BULLETIN 028.05 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 29, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-028.05

Current AMSAT Operations Net Schedule For AO-13

AMSAT Operations Nets are planned for the following times. Mode-B Nets are conducted on AO-13 on a downlink frequency of 145.950 MHz. If, at the start of the OPS Net, the frequency of 145.950 MHz is being used for a QSO, OPS Net enthusiasts are asked to move to the alternate frequency of 145.955 MHz.

Date	UTC	Mode	Phs	NCS	Alt NCS
06-Feb-94	0530	B	057	W5IU	WA5ZIB
12-Feb-94	2200	B	063	W9ODI	VE2LVC
20-Feb-94	0200	B	070	WA5ZIB	W5IU
28-Feb-94	0430	B	068	WB6LLO	W9ODI

Any stations with information on current events would be most welcomed. Also, those interested in discussing technical issues or who have questions about any particular aspect of OSCAR satellite operations, are encouraged to join the OPS Nets. If neither of the Net Control Stations show up, any participant is invited to act as the NCS.

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SB SAT @ AMSAT \$ANS-028.06

KO-25 BBS SERVICE BEGINS

HR AMSAT NEWS SERVICE BULLETIN 028.06 FROM AMSAT HQ

SILVER SPRING, MD JANUARY 29, 1994

TO ALL RADIO AMATEURS BT

BID: \$ANS-028.06

KITSAT-OSCAR-25 Begins Bulletin Board Operations (BBS) 01-FEB-94

KO-25 will open its BBS service beginning on 01-FEB-94. Many discussions are going on about KO-25 services. Thank you for your cooperation so far by keeping your transmitters silent on the KO-25 uplink frequencies so that we could complete our experiments with KO-25. KO-25 will operate in normal mode, 9600 baud FSK using the usual set-up for any of the 9600 baud OSCARS, e.g., KO-23, UO-22, or PoSAT. You will, therefore, not have to make any changes to your station to use KO-25.

Since not all the on board experiments are not finished yet on KO-25, there will be, at times some interruptions of service. But, SaTReC has decided to open the service because the remaining experiments will not cause any serious problems with the KO-25 BBS service.

"We hope you enjoy our new star in space," says Hyungshin Kim of the Korean Institute of Advanced Space Technology.

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SB SAT @ AMSAT \$ANS-028.07
AO-13 ZRO TEST SCHEDULES!

HR AMSAT NEWS SERVICE BULLETIN 028.07 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 29, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-028.07

AO-13 ZRO Tests Begin For '94

AMSAT-OSCAR-13

ZRO TEST SCHEDULE

FEBRUARY-MARCH 1994

The ZRO Memorial Technical Achievement Award Program, or just "ZRO Test" has a new schedule for February and March, 1994, via AMSAT-OSCAR-13. This activity is a test of operating skill and equipment performance.

During a typical ZRO run, a control station will send numeric code groups using CW at 10 words-per-minute. At the beginning of the run, uplink power from the control station is set to match the general beacon downlink strength. This is level "zero". The control operator will send and repeat a random five-digit number, then lower his uplink power by 3 dB (half power) and repeat the procedure with a new random number (level "1"). This will continue to a level 30 dB below the beacon (level "A").

A participating listener monitors the downlink signals until he or she can no longer copy the numbers. Those who can hear the beacon will qualify for the basic award by copying the code group heard at level "zero". The challenge is to improve home-station performance to a point where the lower-level downlink signals can be copied (levels 6 through A). To date, only one station, Darrel Emerson (AA7FV), has successfully copied level "A".

The following schedule of Mode "B" tests were chosen for convenient operating times and favorable squint angles. The tests can be heard on 145.840 MHz. Andy WA5ZIB will conduct all the tests. Mode "JL" tests will no longer occur due to the failure of AO-13's 70-cm transmitter.

Day	Date (UTC)	Time	Areas covered
Saturday	Feb. 12, 1994	2345 UTC	NA, SA, Europe, W. Africa
Sunday	Feb. 20, 1994	0330 UTC	NA, NW SA, Japan, Pacific
Saturday	Feb. 26, 1994	1930 UTC	NA, SA, Europe, Africa, ME

Saturday Mar. 19, 1994 1930 UTC NA, SA, Europe, Africa
Saturday Mar. 26, 1994 2315 UTC NA, SA

Note that the dates and days are shown in "UTC", thus the second test occurs at 9:30 PM CST Saturday night (the 19th). Any changes will be announced as soon as possible via the AMSAT HF and AO-13 Operations Nets.

All listener reports with date of test and numbers copied should be sent to Andy MacAllister WA5ZIB, AMSAT V.P. User Operations, 14714 Knights Way Drive, Houston, TX 77083-5640. A report will be returned verifying the level of accurate reception. An S.A.S.E. is appreciated but not required.

Information about the AMSAT Awards Program can be found on page 197 of the "Proceedings of the AMSAT-NA Tenth Space Symposium" (1992). This paper, covering all the AMSAT-NA awards including specifics on the ZRO Test, was reprinted on page 10 in the March/April 1993 issue of "The AMSAT Journal". The ZRO Test information provided in the article covers test procedures, means for obtaining certificates and gives some historical background about the program. Reprints of the article can be obtained for an S.A.S.E. to WA5ZIB at the address above.

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SB SAT @ AMSAT \$ANS-028.08
AO-21 HAS 3RD BIRTHDAY

HR AMSAT NEWS SERVICE BULLETIN 028.08 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 29, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-028.08

Happy Birthday AMSAT-OSCAR-21!

On 29-JAN-91 the first international Orbiting Satellite Carrying Amateur Radio (OSCAR) in which radio amateurs from the former Soviet Union (CIS) worked together with radio amateurs from Germany was successfully launched.

The official name of the project was RM1, which stands for "RADIO M-1". The digital transponder RUDAK-2 is part of RM1.

After the launch from the Northern Cosmodrome in Plesetsk, Russia, the satellite was named as AMSAT-OSCAR-21, to emphasize that the spacecraft was built by, and for, Radio Amateurs around the world.

AMSAT OSCAR-21 was attached as a secondary payload (Piggy-back) aboard the CIS geological research satellite "INFORMATOR-1".

AMSAT-OSCAR-21 (also known as RS-14) is a joint project between AMSAT-U in Russia and AMSAT-DL in Germany.

[The AMSAT News Service (ANS) would like to thank DB20S for this bulletin item.]

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SB SAT @ AMSAT \$ANS-028.09
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 028.09 FROM AMSAT HQ
SILVER SPRING, MD JANUARY 29, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-028.09

Weekly OSCAR Status Reports: 29-JAN-94

A0-13: Current Transponder Operating Schedule:

L QST *** A0-13 TRANSPONDER SCHEDULE *** 1994 Jan 31-Apr 04

Mode-B : MA 0 to MA 90 |

Mode-BS : MA 90 to MA 120 |

Mode-S : MA 120 to MA 145 |<- S transponder; B trsp. is OFF

Mode-S : MA 145 to MA 150 |<- S beacon only

Mode-BS : MA 150 to MA 180 | Blon/Blat 180/0

Mode-B : MA 180 to MA 256 |

Omnis : MA 230 to MA 30 | Move to attitude 240/0, Apr 04

Poor Sun angle and battery testing need maximum OFF time.

[G3RUH/DB20S/VK5AGR]

F0-20: The following is the current F0-20 operating schedule:

From January '94 thru March '94, the analog mode and the digital mode will be on alternately for a week at a time.

ANALOG MODE:

09-FEB-94 7:15 -TO- 16-FEB-94 7:40 UTC

23-FEB-94 8:05 -TO- 02-MAR-94 6:40 UTC

09-MAR-94 7:05 -TO- 16-MAR-94 7:30 UTC

23-MAR-94 7:52 -TO- 30-MAR-94 8:15 UTC

DIGITAL MODE: Unless otherwise noted above.

[Kazu Sakamoto (JJ1WTK) qga02014@niftyserve.or.jp]

A0-21: ZL3VTV works A0-21 with great success from his QTH in Christchurch, New Zealand. He regularly works stations in Australia with ease using a fixed 10 element beam pointed 30 deg above the horizon on the uplink and using a collinear antenna for the downlink. ZL3VTV is looking for to work more ZL's and would entertain schedules. [ZL3VTV @ZL3AC]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send

your observations to W00HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, W00HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

/EX

Date: 30 Jan 94 20:53:55 GMT
From: news-mail-gateway@ucsd.edu
Subject: Anyone have cct diagram for HP2160A PSU pse ?
To: info-hams@ucsd.edu

Hello all,

I have here two HP2160A power supplies, which I would like to convert for 13.8V use. Unfortunately, there are no pots in the thing that can be conveniently twiddled ! The PSU has some sort of interface card on it, although I have no information on it but it would seem likely that it's for remote voltage (current ?) control and switching, and the card also has the regulation circuitry on it as well.

I have two options, either modify the interface card, but I'd need a circuit diagram, or use the main hardware like the transformer and smoothing capacitors and build my own regulation circuit. Although I'd quite like a circuit diagram to do the second option, as the transformer has multiple tappings on it, and I'd quite like the data on it.

The only thing I do know about this power supply is that it was for some sort of medical equipment. I found this out from HP UK, but they couldn't provide a circuit diagram and told me the things were obsolete !

Theres some back panel information, as follows:

SER # 817-00434
MODEL # 2160A
OPTION # 15
SYSTEM SERIAL NO. 0986B

Plus, the units were made in the USA !

If anyone could supply me with a circuit diagram for these PSU's I'd be very grateful.

Cheers for any help and 73 Ian G0TLB

Please reply to: i.a.cameron@open.ac.uk - As I don't subscribe to info-hams anymore as I can't make the time to read it all !

Date: Fri, 28 Jan 1994 20:36:05 GMT
From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!gatech!
mailer.acns.fsu.edu!trivia.coginst.uwf.edu!triton!mmollere@network.ucsd.edu
Subject: Code tapes, looking for.
To: info-hams@ucsd.edu

Am looking for code tapes in Pensacola, FL. If anyone knows where where I can get same, please advise. Also, is there code on instruction on CD? Thanx.

Mark J. Mollere
mmollere@conch.senod.uwf.edu
U. of West Florida

Date: 27 Jan 1994 16:42:49 GMT
From: nntp.ucsb.edu!library.ucla.edu!europa.eng.gtefsd.com!news.umbc.edu!
haven.umd.edu!cville-srv.wam.umd.edu!ham@network.ucsd.edu
Subject: FCC: Whats taking so long????
To: info-hams@ucsd.edu

In article <CKAM3v.I2M@zeno.fit.edu>,
The Pyrotechnic <haga@zach.fit.edu> wrote:
>My god, ive been paitently waiting for my call sign to come in... it's been
>well over 9 weeks now, and it still hasn't arrived.... Does anyone know
>a number that i may call to check up to see if they have even issued it
>but maybe not have mailed it yet or something? im tired of waiting!!
>
Well, if you absolutely MUST call and find out how it's going, the number is 717-337-1212. They will generally be very nice about it, but remember that any time spent gabbing about why your license isn't out yet will detract from the ONE day a week that they run ham licenses.

No, there's no logging system up there, either, meaning that your application sits in a big, FIFO stack until its turn comes up, and your info is entered into the computer and printed up. Yes, this means that if your license hasn't been printed, there is really no way of checking (save for someone looking through the stack itself) to see where yours is on the queue.

Yes, the system stinks. Yes, it needs a serious overhaul, which it is probably getting in the next two years (instant licensing, electronic applications, choice of callsigns, reduced waiting times...). Consider that we're living "the old days." That should be some consolation in a few years.

Patience is a virtue.

```

73,          \ / Long      Original      The
Scott Rosenfeld  Amateur Radio NF3I  Burtonsville, MD | Live      $5.00
WAC-CW/SSB WAS DXCC - 123 QSLed on dipoles _____| Dipoles! Antenna!

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Date: 27 Jan 1994 19:21:39 GMT
From: nntp.ucsb.edu!library.ucla.edu!agate!headwall.Stanford.EDU!unixhub!lll-winken.llnl.gov!fastrac.llnl.gov!cronkite.nersc.gov!
Greg.Chartrand@network.ucsd.edu
Subject: FCC form 610-V
To: info-hams@ucsd.edu

In the FCC announcement regarding vanity callsigns, they stated that every application for a specific callsign would have to be made on a form 610-V. I called the FCC in Washington and they said no such form exists. Knowing our government, it probably will take a year or two to design one, and another year or two to have it approved and printed in quantity.

Does a form 610-V already exist in some dusty government warehouse?

Greg
WA9EYY/3

Date: Sun, 30 Jan 1994 18:21:44 GMT
From: [sdd.hp.com!swrinde!cs.utexas.edu!howland.reston.ans.net!torn!nott!cunews!
freenet.carleton.ca!FreeNet.Carleton.CA!ab718@network.ucsd.edu](mailto:sdd.hp.com!swrinde!cs.utexas.edu!howland.reston.ans.net!torn!nott!cunews!freenet.carleton.ca!FreeNet.Carleton.CA!ab718@network.ucsd.edu)
Subject: Frequencies for Animal Tracking ?
To: info-hams@ucsd.edu

In a previous article, halvey@home.amigans.gen.nz (Dave Halverson) says:

```
>--
> Does anyone out there happen to have a list of the bands used for tracking
> animals fitted with radio collars. Preferably in New Zealand, but other
```

> locations would also be of interest.

>

> Thanks in advance.

>

>--

> Dave Halverson, Wanganui N.Z.

> halvey@home.amigans.gen.nz

>

Hi Dave,

Here in the Great White North (Canada) some of the radio collard are between 151 to 152 Mhz.

I hope it will help.

Daniel VE3DCL

--

Date: 27 Jan 94 13:42:22 -0600

From: nnntp.ucsb.edu!library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!
mrtnt.ntns.com!tntvax!ddb@network.ucsd.edu

Subject: Help - your Vertical Ant. experiences.

To: info-hams@ucsd.edu

I posted this on the ...antenna group, but more people read this so...

I'm looking to buy this weekend a ground independent vertical for HF. I have a very limited area (can go up as far as I want) and limited funds. 40m and 80m would be a big + but not a requirement.

What's your opinion on:

Cushcraft R5 (R7 too \$)

Butternut HF6V

GAP Challenger DB-VIII

MFJ-1796

Others (?)

Dan (NY9K)

Date: Fri, 28 Jan 1994 20:33:52 GMT

From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!gatech!

mailer.acns.fsu.edu!trivia.coginst.uwf.edu!triton!mmollere@network.ucsd.edu

Subject: X application for code?

To: info-hams@ucsd.edu

Is there an X Windows application that will generate morse code?
If so, please advise. Thanx.

Mark J. Mollere
mmollere@conch.senod.uwf.edu
U. of West Florida

End of Info-Hams Digest V94 #93

